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Options for the Creation of a Monitoring and Evaluation Unit within the Ministry of Health and Population, Egypt

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Abstract

The process of health system reform in Egypt has brought an increased need for improved processes of monitoring and evaluation of health sector activities. This report outlines the existing Ministry of Health and Population "Inspection and Evaluation" unit, as well as other agencies involved in health care monitoring, in terms of duties, staffing, and issues that the organizations need to examine and resolve. It goes on to describe three options for handling monitoring and evaluation in the future. The first option is a reform of the existing unit within the Ministry structure; it would initially have three main sub-units: quality and accreditation, data quality and use, and dissemination and training. The second option is to develop a monitoring and evaluation unit within the National Information Center for Health and Population. The third option is to create a quasi-autonomous unit that would provide technical guidance to vertical programs and monitor the quality and consistency of monitoring and evaluation activities within those programs. Finally, the report examines the advantages and disadvantages of each option, and recommends the option seen by the authors as most effective.

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Acronyms

BTS	Budget Tracking System
DOP	General Directorate of Planning
EIS	Executive Information System
FHF	Family Health Fund
HIS	Health Information System
IT	Information Technology
M&E	Monitoring and Evaluation
MOF	Ministry of Finance
MOHP	Ministry of Health and Population
MPH	Masters (degree) in Public Health
NICHP	National Information Center for Health and Population
PHR	Partnerships for Health Reform
TSO	Technical Support Office
USAID	United States Agency for International Development

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Executive Summary

The Ministry of Health and Population (MOHP) in Egypt has undergone extensive reorganization in recent years. This reorganization has brought together many disparate activities in the health sector under the central management of the MOHP. In addition, the process of health reform has brought a new focus on the roles and responsibilities of the program managers and an increased need for improved processes of monitoring and evaluation (M&E) of health sector activities. The consultants from the MEASURE Evaluation Project and the Partnerships for Health Reform Project were asked to assess the current capacity for M&E within the MOHP and to outline options for the establishment of a monitoring and evaluation unit within the Ministry itself. The options are presented in this document along with a discussion of the advantages and disadvantages of each and recommendations for the Minister of Health and Population.

The first option is a reform of the existing "Inspection and Evaluation" unit within the Ministry. While technically the current structure does not perform the role of an M&E unit, it houses some of the staff and activities (for example, a Quality Directorate) around which an M&E unit could be built. The M&E unit would comprise three main sub-units. The Quality and Accreditation sub-unit would be responsible for quality assurance activities including facility accreditation. The Data Quality and Use sub-unit would monitor the quality of data coming into the Ministry, including standardization of indicators and denominator calculation. It would also produce regular reports on the progress of programs and activities within the MOHP. Finally, the Dissemination and Training sub-unit would be tasked with communicating the information from the various M&E functions of the unit to managers in the field. This group would also conduct training at the national and subnational levels on monitoring and evaluation methods appropriate to each level.

The second option is to develop a Monitoring and Evaluation unit within the National Information Center for Health and Population (NICHP). Under this configuration, the M&E unit would encompass the same primary functions as described above in Option 1, but would be parallel to the four existing units of the NICHP. The NICHP director would oversee all the activities of the M&E unit and report on them to the Minister. This configuration is advantageous in that it builds on an existing unit in the Ministry and can improve capacity within the unit. However, it also diminishes the importance of M&E activities, in that decision making and reporting would be done through the NICHP.

The third option is a quasi-autonomous unit that would provide technical guidance to vertical programs and also monitor the quality and consistency of M&E activities within those programs. The staff would be experts in M&E but would work with staff in the vertical programs on the technical aspects of activities. One important component of this configuration is the dissemination function that would be designed to feedback information on program effectiveness to mangers at the governorate and district levels. This option would report directly to the Minister and would neither oversee, nor be attached to, any of the vertical programs.

The authors favor the first option as the most effective means to establishing coordinated monitoring and evaluation activities within the MOHP. They support their conclusions with a table showing the relative advantages and disadvantages of the three options. In addition, the final summary highlights some important points to be considered no matter which option is finally selected.

1. Introduction

The Ministry of Health and Population (MOHP) in Egypt has undergone extensive reorganization in recent years. This reorganization has brought together many disparate activities in the health sector under the central management of the MOHP. In addition, the process of health reform has brought a new focus on the roles and responsibilities of the program managers and an increased need for improved processes of monitoring and evaluation (M&E) of health sector activities.

Monitoring and evaluation are functions critical to the management of any organization, but they take on additional significance for an organization that is responsible for such a variety of vital activities as the MOHP. Efficient project monitoring is necessary to track the progress of project activities against stated objectives and to make changes when necessary to remain on track. Program monitoring is used to track the various contributions of projects toward overall program objectives. In addition, the data collected through monitoring can be used to analyze current situations, identify problems as they arise, and design effective solutions to address them. The data can also be used to track trends in health care needs over time, which allows for more efficient allocation of scarce human and material resources. Finally, regular monitoring of program activities is crucial for strategic planning and negotiations with donors.

Evaluation fills a different function within a ministry of health. Whereas monitoring is the routine process of data collection on activities for decision making, evaluation assesses the effectiveness of programs and projects in meeting their ultimate goals. Ideally, evaluation should be built into a program from the outset in order to measure scientifically the impact on the target populations. Large-scale evaluation efforts can be used to track cost efficiency of projects and the relative impact of various forms of service delivery and other health sector activities.

Currently, there is no single, centralized M&E unit within the MOHP. Each of the vertical programs has within it an M&E unit or office that tracks activities specific to that program or project. These units rarely share information or collaborate with the M&E units of other programs. The Ministry's National Information Center for Health and Population (NICHP) has begun to collect data from the vertical programs into a centralized system with some degree of success (see Section 2.2). However, a real culture of monitoring and evaluation, or use of data to inform decisions, does not yet exist within the MOHP.

Moreover, MOHP staff queried for this study reported that many of the M&E units' tracking activities are carried out in response to short-term program needs of policymakers. Such analysis—while helpful, for example, in solving an immediate problem or answering a donor request—often then is lost to the system and may unknowingly be duplicated by others at a later date.

This report proposes the establishment of an M&E unit in the central structure of the MOHP. It offers three options of how the unit could be configured and what the reporting relationships would be with other divisions of the MOHP. The descriptions of the options include the staffing needs and roles and responsibilities of the various components of the unit. The report also describes the prime advantages and disadvantages of each approach.

The establishment of this M&E unit is intended to bring together the disparate groups existing within the vertical programs, in addition to the NICHP, in order to develop a comprehensive approach to monitoring and evaluating programs within the MOHP.

2. Status of Existing Components

The current Ministry of Health and Population organigram (organizational diagram) contains an "Inspection and Evaluation" unit (so named in Ministerial Decree #272, announced in 1998). The unit is located in the Office of the Minister's Health Affairs and reports to the undersecretary for health affairs. The organigram shows that the unit comprises six departments:

- Monitoring and Evaluation,
- Following-up and Control,
- Technical Monitoring,
- Quality,
- Financial and Managerial Auditing, and
- Communication Affairs.

The organigram also spells out the hierarchy within these departments.

Despite this apparent organization, the departments' specific functions and the responsibilities of employees within the departments are not well defined. Indeed, some of the departments are staffed and carry out certain limited functions; others have neither staff nor duties. Many unit employees interviewed for this study could not locate their particular office or position on the organigram. Employees in related offices suggested that the organigram has no value; rather, duties and reporting relationships are defined by the ad hoc needs of the Minister's office, the Technical Support Office (TSO), or the Population and Planning Office for information from those who can produce it fast and well, regardless of their official status in the MOHP structure.

In short, the Inspection and Evaluation unit does not function as a true M&E services and support body. It would be better described as an accumulation of functions, which are loosely or not at all related.

Also within the Office of Minister's Health Affairs is the National Information Center for Health and Population (NICHP). The NICHP performs some monitoring and evaluation functions for the MOHP. It collects data from various projects into regular reports and performs limited analyses on the data. However, the NICHP was conceived as the support unit for the national Health Information System (HIS)—specifically, as an Information and Documentation Center with an emphasis on data collection for donor-funded and standard health programs—and gaps in its mandate prevent it from fully taking on the M&E role. In addition, it is only recently that there has there been a call for extensive M&E data analysis, and the newly reorganized NICHP does not yet have the staff capability to provide this along with the reports that comprise the Executive Information System (EIS).

In addition to the Inspection and Evaluation unit and the NICHP, a new MOHP Budget Tracking System (BTS) contributes M&E-related functions.

In summary, the M&E function of the MOHP as presently constituted is fragmented and lacking in direction and resources. Nevertheless, certain entities that now play a part in M&E activities are likely to be used in the evolution of the M&E function into a major institutional effort.

The rest of this section looks at four organizations—the Quality Directorate of the Inspection and Evaluation unit, the NICHP, the Follow-up and Control Department (also of the Inspection and Evaluation unit), and the BTS. The descriptions are not comprehensive, as it was often difficult to determine where these organizations were located and who worked in them. To the extent possible, they are discussed in terms of their functions, staffing, and issues to consider in terms of the development of their M&E capabilities.

2.1 The Quality Directorate

2.1.1 Background

The Quality Directorate was established to be an oversight body to assure quality standards in health care. Its eventual scope of work will include the establishment of clinical guidelines and training of providers in their use, accreditation of facilities, creation of supervisory systems, and applied research. The components of the directorate are in various stages of development, so to date the activities on which the group has focused are the accreditation process and oversight of clinical guidelines. While the MOHP itself will continue to be the agency charged with the accreditation of FHF facilities as they enter that program, and perform the accreditation renewal on a periodic basis, it is the directorate that will prepare the standards for those activities.

While Decree 272 located the Quality Directorate in the Office of the Minister's Health Affairs, many of those interviewed characterize it as an "orphan" with no place to report officially, no permanent director, and no official role in health affairs. The directorate previously reported to the TSO for administrative matters and the Population and Planning Office of the Population and Family Planning Directorate for general direction. Now it reports only to the TSO. However, because the Quality Directorate is outside the normal hierarchy of the MOHP, it does not receive the needed support for such matters as travel resources.

2.1.2 Functions

At present the Quality Directorate performs two major functions: accreditation and clinical guidelines. In addition, its employees are called upon to provide services to other aspects of the health reform project as well as other MOHP activities as needed.

Accreditation

Accreditation is a pillar of the health reform program, because meeting accreditation standards is required for the new family health care facilities to become part of the Family Health Fund (FHF). At present, a limited number of pilot facilities have been accredited, but this number is expected to grow rapidly in the future. For this reason, accreditation is emerging as a key activity of the Quality Directorate.

To date the directorate has contributed to the development of the accreditation process on both the ministry and facility levels. Early in the process, it researched MOHP laws that support

accreditation and then wrote policies and procedures that govern the process. It contributed to the development of accreditation standards for a variety of services, such as patient rights, clinical care, and environmental safety. Later it helped to edit the questions and verification elements in the accreditation survey tool.[1] At the health facility level, it has prepared pilot sites for the survey by training them to improve their services using the tool as a guide. It has participated in implementation by doing data collection and analysis, and reporting. In the future the directorate will do baseline accreditation of facilities seeking to join the FHF and repeat the survey every one or two years depending on the facility score.

Clinical Procedures

National guidelines for clinical norms and procedures were developed for the basic benefit package created for the health reform project. The guidelines were established through a consultative process that the Quality Directorate carried out with various Egyptian medical specialty organizations, MOHP experts, sector program experts, and university faculty. Once the initial list of diseases was established, the directorate edited the guidelines. It is following up this work by developing methods to assess whether practitioners are following the guidelines and by assessing the need for guidelines in additional clinical areas according to the prevalent diagnoses in the pilot facilities

The directorate also helps to disseminate the clinical practice guidelines to staff working in the pilot facilities of the health reform project,[2] as well as for any project in the MOHP that requires quality improvement activities.

2.1.3 Staffing

The Quality Directorate currently employs six physicians, one nurse, and four administrative staff. The position of director is vacant, with some unsuccessful recruiting efforts having been made recently to fill it.

In order to provide expertise in a range of medical specialties that are likely to be included in a broadly applied FHF model, the Ministry has engaged six qualified doctors in the areas of surgery, infectious diseases, cardiovascular health, neonatology, obstetrics/gynecology, and pediatrics for the directorate. Each contributes to the establishment of clinical guidelines in his or her specialty and to the other directorate activities described above. While the physicians are dedicated full-time to directorate activities, some of their time goes to activities other than the health reform program; for example, they may be called upon to do data collection for various surveys. It is estimated that their actual level of effort in reform project activities is roughly equivalent to two full-time positions. It can be assumed that at the current level of demand the number of employees is adequate for now.

There is also a separate two-person "M&E" office, which answers complaints made to the MOHP. Apparently this office plays no role in monitoring or evaluating Ministry programs, nor does it have a systematic method for dealing with complaints from Ministry clients.

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[1] A full list of the survey modules is available from the Quality Directorate and the Quality Improvement Program of PHR/Egypt.

[2] The actual training in basic clinical procedures is done by Egyptian university faculty under contract to the MOHP.

2.1.4 Issues

- The accreditation process is part of the larger Egyptian health reform strategy and currently applies to primary care pilot sites participating in the Family Health Fund. At present the accreditation tool is being tested and applied in the pilot district of Montazah. Broad application of the accreditation process will develop together with the other components of health reform.

- The staff are paid by the MOHP but have no budget for activities. The TSO is supposed to help channel activities to the Quality Directorate.

- The physicians working with the unit only work part-time for the health reform project and spend much of their time working on other projects for the added income. This lack of full-time commitment reduces the capacity of the directorate to extend its mandate.

- The directorate currently has no director and no direct linkages with other parts of the MOHP. This also reduces morale and prevents the unit from establishing working relationships with other groups in the MOHP. The directorate requires further legitimization within the MOHP in order to be recognized as an integral part of the Ministry.

- Processes to implement existing clinical practice guidelines, update the guidelines, and commission new guidelines are needed.

2.2 National Information Center for Health and Population

2.2.1 Background

The National Information Center for Health and Population was formed by Ministerial decree #336 in 1998 as the primary information services arm of the MOHP and, as such, is the central repository for the national Health Information System. The NICHP comprises four sub-units:

- Information Technology Services,

- Health Information Services,

- Human Resources Development, and

- National Health Information Resource Center.

These departments are designed to cover a range of health information services from the computer hardware and software needs, to the design of data input systems, to the eventual analysis and report generation. The NICHP is located within the Office of Minister's Health Affairs and reports directly to the undersecretary.

2.2.2 Functions

The database at the NICHP originated with the management information system put into place by the MOHP with assistance from the United States Agency for International Development (USAID) Child Survival Project several years ago. This system became the basis of a larger system which now incorporates data from multiple sources into a national health information system. These data come from MOHP facilities and affiliates only; they do not include the private sector. The NICHP staff assess the completeness of data coming in from the governorates, and pursue missing information. They generate annual reports on health indicators, which are distributed to top-level decision makers at the NICHP.

The NICHP also has responsibility for the development and implementation of the Executive Information System. This system is designed to provide information on key indicators to assist top-level decision makers in program planning through an easy-to-access intranet. At present, the system is still in developmental phases and not currently available to all upper-level staff. In addition, problems still exist in the choice and consistency of the indicators, which are fed into the NICHP (and thus the EIS).

The NICHP has designed for the MOHP a website that is in the process of implementation. It also operates a training center for technology training, and an "internet café" to provide web access to MOHP staff.

2.2.3 Staffing

The NICHP receives technical assistance through the Partnerships for Health Reform (PHR) Project in the form of a resident advisor in information technology. This resident advisor will be returning to the United States by Summer 2000, and the PHR Project will end in late 2000. Because many of the information technology (IT) staff have received supplemental funding through external mechanisms, alternative methods to maintain their salaries must be explored in order to keep the NICHP functioning.

A list of the NICHP staff is annexed to this report.

2.2.4 Issues

> One of the biggest obstacles to the effective use of the EIS is the reluctance of many vertical programs to share raw data with the NICHP. At present, many share only pre-generated charts for a number of key indicators but not the data files themselves. This limits the ability of the NICHP to assess the quality of the incoming information or to conduct further analyses of interest.

> The NICHP does not control the quality of the data coming into the system (in part due to the issue discussed above). A cursory examination of some of the results suggests there may be some major problems with data quality—particularly in the consistent and accurate definition of denominators for the indicators.

> Many of the indicators chosen for the EIS are not appropriate because of the inaccuracy of the denominator (which biases interpretation) or the improper use of outcome-level

indicators in a routine monitoring system. (Outcome-level indicators are not sensitive to change on a routine basis and are more appropriately used to evaluate program success.)

> Although the NICHP has made great strides in bringing together data from multiple sources and presenting it in an easy-to-use format, little training or follow-up has been conducted on the use of the data for decision making. This is especially true at the governorate and district levels.

> Several interviewees identified the problem of not having usable data flowing back to end users at the organizational level where the raw inputs were collected and sent upward.

> While it may not be the stated policy of the NICHP to send program effectiveness analyses below the EIS executive level until a much later date, policymakers should be aware that there is much informal calculation of program effectiveness is being done, often with pencil and paper.

Local health administrators are trying to link expenditures with success measures, in order to argue for larger allocations from the next highest level. While the NICHP is not yet in a position to offer assistance in this area, it may be advisable for NICHP to conduct user requirements studies such as a survey of locally collected program and budgetary data.

The MOHP General Directorate of Planning (DOP) does has a budget tracking system that collects data from the governorates; however, this system is designed to track large-category budget allocations and is not useful for individual program monitoring or evaluation.

2.3 Follow-up and Control Section

2.3.1 Background

The decree that establishes an M&E function of the Inspection and Evaluation unit makes mention of the follow-up and control function, which appears on the Ministry table of organization under the monitoring and evaluation box. The closest fit to that function is the MOHP General Directorate of Planning, also known as the Planning Sector. DOP General Director Dr. Ibrahim Saleh describes one of the department's functions as that of analyzing departments within the MOHP. The department also is in charge of *Bab* 3[3] matters, which concern new construction and renovation.

Hospital construction in Egypt is recognized widely as a political issue that suffers in its execution. That is, hospitals are considered to be facilities to which governorate and other politicians can point with pride, and so there are instances of political placement of hospitals as well as overbuilt facilities with major portions of buildings going unused because of lack of patient demand or understaffing.

While each governorate office of the DOP reports on hospital room demand to the central office, the system for producing useful data and basing construction decisions on that data is flawed, an area

[3] There are three major spending categories, called "babs" ("gates"), in the MOHP accounting system: Bab 1 covers staff, Bab 2 covers supplies, and Bab 3 covers capital spending for equipment and facilities.

that could use improvement. Dr. Saleh urges having an M&E office provide a better set of standards to follow in planning facilities, and paying closer attention to how construction money is allocated within and among catchment areas.

To complicate matters, planning for Bab 3 expenditures is separate from the planning of personnel and supplies funds (Babs 1 and 2). This can lead to gross misallocation of hospital rooms, staff, and critical equipment.

Strategic planning tools have been provided to the DOP through the work of the current Health Policy Support Program. These tools assist in linking hospital bed-needs analysis with health workforce issues. However, institutionalization of these tools is in an early phase. Consistent use of models such as these could be assisted by an M&E unit that understands and advocates for them.

2.3.2 Functions

Working under the umbrella of the National Plan for health facilities, the DOP performs the following functions, which are more implementation than actual planning:

1. Financial disbursement and follow-up implementation for Bab 3, and solving problems of implementation;

2. Donor relations and reporting on matters involving the Ministry of International Cooperation. According to the DOP director, this office is the only one within the MOHP empowered to work with the Ministry of International Cooperation, and it often bypasses institutional hierarchy to report directly to the Minister. This supports the frequently made statement that the informal reporting relationships found within the MOHP often do not coincide with the "official" table of organization. This is not surprising or unique, but it points to the need to make a true M&E unit highly visible and perceived as useful to planners and problem solvers in a transparent manner.

3. Evaluation and use of indicators produced by the newly established Health Economics Department for costing, tracking efficiency and achievement of program goals, budget tracking, and a uniform system of accounting for all ministries. However, the only function that seems to be highly operational, is the Budget Tracking System, which is related to the NICHP.

The need for increased transparency mentioned above can be promoted not only through placement of the M&E unit in a prominent "official" location, but also through the establishment of effective and enforceable lateral reporting relationships for data collection and analysis, discussed below.

2.3.3 Staffing

The staffing interface between this agency and the M&E function is primarily in the assignment of staff to carry out the BTS function with the NICHP, currently at the level of three analysts.

2.3.4 Issues

> The prime issue is that the function is somewhat ad hoc and donor driven. The DOP General Director responds to the needs of the Minister of Health for information primarily to serve the donor program design function, and may be sacrificing agency capacity to assemble facility planning information in the larger sense, in particular as it relates to the national health master planning activities.

> BTS staff work within the NICHP, with very substantial staff input at the lowest levels of the health service organization, assembling and double checking budgetary data originally produced by the Ministry of Finance (MOF) offices. At the end of 2000 the BTS will have brought the two sets of accounting records into reconciliation. It is unclear how much duplication of MOF work will go on after that date, or whether the BTS will have established a more reliable system of accounting for expenditures than the MOF has had, and how much the MOF will agree to a greater role for BTS activities in the long run.

> It is unclear whether Babs 1 and 2 can be affected by data collection and analysis by this office. Under the Egyptian system there is a very clear delineation of powers between the personnel planning and control function and the facilities funding area. To rationalize the entire administrative system for purposes of budgetary accountability (matching staffing levels and specialties with facilities, and facilities with local demand for medical services) would be an enormous benefit, but not one likely to be accomplished through M&E alone.

> According to the General Director, this office should have the facilities inspection function brought into it so that the planning of Bab 3 expenditures could be better based on an analysis of hospital facility conditions. He did not say it, but evidence is ample that the inspection of hospital conditions would show a great mismatch between demand for beds and their existing number in some geographical areas. Having a unitary system that uses the existing strategic planning models for bed needs and health workforce, as well as assessing the condition of existing facilities, would clear up much of the mismatch. Care will be required, however, in performing inspections in ways to minimize the perception of that function as unreasonably threatening to staffing and funding levels.

2.4 Budgetary Tracking System

2.4.1 Background

The Budgetary Tracking System is discussed in this report for the sake of completeness of analysis only. The BTS is recognized as a legitimate function that is underway in support of health reform, and has been described fully in Cressman and Wolowyna (1995 a,b,c).

The BTS is located within the MOHP General Directorate of Planning, and works closely with NICHP countrywide. It has three staff attached to NICHP and representatives at the governorate and the district levels. As does any large organization, the MOHP legitimately uses BTS methods as a way of tracking expenditures in the gross sense. It also uses BTS for confirming the data supplied to the Ministry of Finance, although the methods for aggregating such information differ for the two ministries, and the problem of redundancy may be remote.

In the Egyptian system there is a clear delineation among the three major babs. Historically there has been a strong central control of these spending categories, resulting in assignments of staff (Bab 1), supplies (Bab 2), and capital spending for equipment and facilities (Bab 3) based on allocations among political subdivisions without regard for locally perceived needs (absolute, or demand-derived needs), or locally perceived relationships among the categories (derived from scale of operations and interdependency of resources).

BTS is primarily concerned with data collection and analysis on Bab 3, but has set up forms and collected data on Babs 1 and 2 also, with the aim of analyzing personnel distribution and pharmaceutical spending. While Bab 3 spending decisions are made at the central level, Bab 1 and 2 resources flow directly from the Ministry of Finance to the governorates. Thus, the discretionary power to decide on Bab 1 and Bab 2 spending is in the hands of the governorate level, with some discretionary power at even the district level.

The BTS analysis parallels the MOF tracking system, and the BTS is seen as a check on MOF figures, as a post audit. BTS reconstructs spending programs and runs checks on reported figures, using updated accrual reports and reconstructed expenditure reports. A BTS team currently goes into the districts on special assignment as required. Using these methods, the goal of the program is to verify and in some cases refine MOF figures on expenditures for equipment and buildings under Bab 3, and to begin to form an accurate history of pharmaceutical expenditure patterns.

The BTS obtains information from 260 units. This year the BTS system will be computerized at the governorate level and will send machine-readable data to the Ministry of Health and Population.

2.4.2 Staffing

BTS has three analysts working to manage the tracking systems in 260 reporting units nationwide. General Directorate of Planning staff are assigned as well at the governorate and district levels, and troubleshooting team is available to go to the field as needed. DOP staff assigned to the BTS are currently supported through USAID Health Policy Sector Program resources.

2.4.3 Issues

> BTS operates on a separate track from HIS. In that HIS is overloaded in terms of the types and amounts of data collected, it is questionable whether the BTS function can be brought into the HIS system.

> There is a question about the impact that the BTS can have on Bab 1 and Bab 2 expenditures, in that decisions on those two areas are made at the governorate and district levels (Bab 3 decisions are made centrally). Can the BTS create within itself a capability in terms of staff and analytical tools to have an influence over personnel levels and pharmaceutical spending decisions that are made diffusely?

> Closer integration of the governorate-level BTS activity with the activities of the undersecretary of health in the governorate would enhance the use of the BTS. At present the BTS is most useful to the General Directorate of Planning for resource allocation monitoring.

3. Options for the Configuration of the M&E Unit

This section presents three options for the development of a monitoring and evaluation unit within the Ministry of Health and Population. It gives an overview of each option, and, where appropriate, details the functions and staff of the unit's subdivisions. The section concludes with a comparison of the options.

3.1 Option 1: Stand-alone Unit Reporting to the Minister or Undersecretary

In this option, the M&E unit would occupy the same spot on the MOHP organogram, but the departments that constitute it would be defined differently and each would have well-defined responsibilities. The unit would report either directly to the Minister or through the undersecretary for the Office of Minister's Health Affairs. The unit will initially comprise three main departments:

- Quality and Accreditation,
- Data Quality and Use, and
- Dissemination and Training.

In Phase 1, foreseen to last 1-3 years, the M&E unit would perhaps double in size from its present configuration, but it would be a relatively small unit and not be subdivided into smaller units. This concept of smallness is critical if the M&E unit is to become effective and to gain stature as a focused organization that can act as an ongoing resource, and can react quickly to the analytical needs of the Minister and his top executives. It also would be counterproductive to make the M&E unit a large organization at the outset in the sense that it could drain human and financial resources.

However, once the unit has established itself within the MOHP hierarchy and has built a solid reputation for quality work, its responsibilities could be extended. In Phase 2, the M&E unit would not grow greatly in terms of staff, but it would gradually expand the functions begun in Phase 1 as the capacity of the staff to handle such functions increases. Each department would eventually be subdivided, with each subdivision having specific responsibilities and separate supervision. In addition, two other departments would be phased in. The Economics department would evolve from work done by the BTS, National Accounts analysts, and the linking of budgetary data and project tracking functions. The coordination function begun in Phase 1 as part of the Dissemination and Training department would evolve into a Coordination department that acts as liaison, assisting with MOHP relations with other ministries and donor agencies.

This section outlines the configuration of the M&E unit under Option 1 (Figure 1) as well as the functions and staffing of each department. It should be noted that this is a start-up plan and adjustments in staffing and responsibilities will be made as the unit develops.

3.1.1 Directorship

3.1.1.1 Function

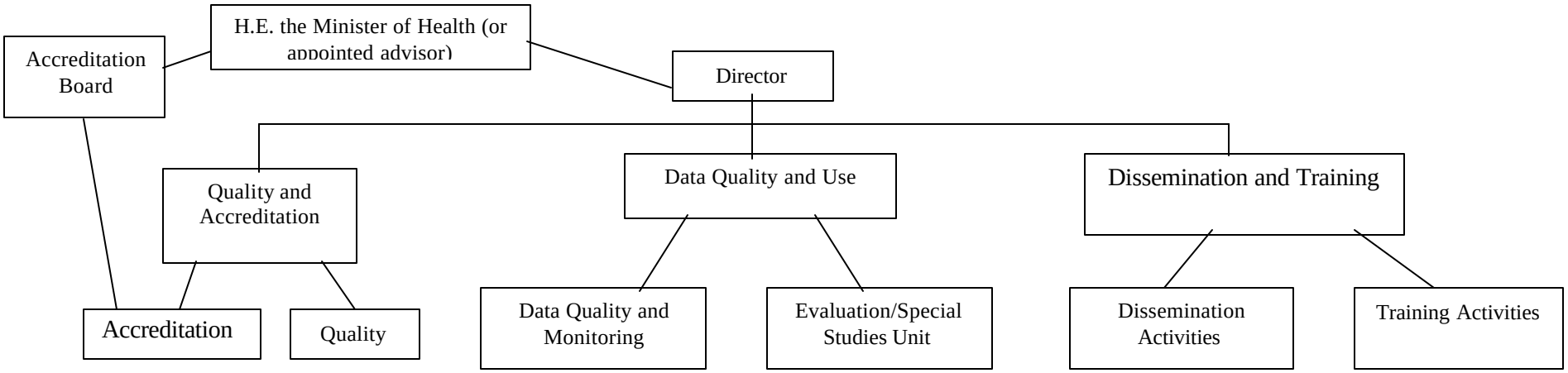
The director of the M&E unit should be someone whose academic credentials include preparation in quantitative areas such as epidemiology or biostatistics. Significant experience in the monitoring and evaluation of public health activities would also be very important. This person will bear ultimate responsibility for all the activities of the unit, including the results of any research conducted.

The directorship will be a position of responsibility. In addition to being the unit's primary liaison with the Minister of Health and the undersecretaries of the other divisions of the MOHP, the director will have a close working relationship with the Minister in terms of producing high quality data analyses on short notice (as the general director of the General Directorate of Planning currently does), and assisting other MOHP departments to make routine but extremely important program effectiveness analyses for the MOHP.

3.1.1.2 Staffing

The director will, perforce, oversee the rest of the M&E unit. Figure 1 shows both the organization of the unit as well as its position within the MOHP:

Figure 1. Option 1: As a Stand-alone Unit Reporting to the Minister or Undersecretary of Health



- Clinical guidelines
- Quality assessment
- Licensing of facilities but not medical personnel
- Training for accreditation

- Data quality control
- Population projections/denominators
- Project monitoring
- Liaison with NICHP and other data collection units (including vertical programs)

- Program/project evaluations
- Special issue studies
- Impact assessment

- Report production
- Data for decision – making
- Marketing of M&E unit services
- Briefing papers

- Training on M&E methods
- Training on data use
- Refresher training on data collection (use of forms, etc.)
- Other types of training

Economics
- Cost-effectiveness studies
- Linking of budgetary data and project tracking
- Health policy analysis
- National accounts
- BTS

Coordination
- Liaison with other ministries
- Liaison with other units of MOHP
- Liaison with donor groups

3.1.2 The Quality and Accreditation Unit

As discussed in Section 2 of this report, at present the Quality Directorate has a limited scope and part-time staffing. As a unit it performs some clinical guideline development but does not function as a government agency that carries out facility accreditation activities as such. Under this reform proposal, the Quality and Accreditation (Q&A) unit would be small at first, but it would take on several related activities as the primary care units are formed nationwide.

3.1.2.1 Function

The Q&A unit is envisioned to have a semi-autonomous status, making a direct report administratively to the undersecretary for the Office of Minister's Health Affairs or to the Minister himself, but as an option it could substantively report to a volunteer board of accreditation. In this way the unit could provide advice and staff input to a board that has independent powers to issue accreditation of facilities. This would not, however, evolve into a licensing board for medical personnel.

This recommendation for a board is made because it is unlikely for the Minister to have the time available to supervise the unit directly, and it is also common practice to have accreditation as a quasi-judicial function involving investigations and findings of fact prior to the issuance of licenses or permits for specialized activities. In a large system like the one found in Egypt, there are many opportunities for the accreditation system to become victim to favoritism and other forms of diversion, so independence is important. In addition, PHR is developing a quantitative survey tool and scoring system to minimize subjectivity and human error.[4]

This unit could also have a strong training component to prepare other MOHP staff to do accreditation of facilities as the establishment of FHF primary care units moves beyond the pilot stage and starts to gain large numbers of applicants. The training would touch on clinical guidelines as well as environmental and physical issues such as waste disposal.

3.1.2.2 Staffing

The unit should be led by a physician or holder of a doctorate in a health-related profession who has strong management experience and knowledge of the MOHP work environment as well as experience in quality improvement program implementation and policy.

The professional staff should include 2-3 full-time doctors and one nurse for the development of clinical procedures, and one specialist in hospital physical plant management and/or construction who

[4] In a true health reform context, responsibility for accreditation is divided between staff and a volunteer board of health professionals in order to separate fact-finding from the actual licensing decision. Staff provide to the board data gathered in structured surveys carried out in health care facilities. The board reviews survey results, noting the presence or absence of certain environmental and physical attributes of the surveyed facility, the sufficiency of its staffing plan by medical specialty, etc. This methodology minimizes opportunity for favoritism or a distortion of the facts needed to be considered in the approval process.

will contribute to the physical intrastructure aspect of accreditation reviews. In addition, there should be one trainer with a background in social sciences or business administration.

Accreditation board members should all be experienced in hospital administration. At least one of the five members should be a civil or structural engineer, one should be a chief financial officer of a medical facility or equivalent, and three should be practicing physicians.

3.1.3 Data Quality and Use Department

The Data Quality and Use department of the M&E unit would comprise two branches: Monitoring/Data Quality and Evaluation/Special Studies. The roles of the two groups are described below:

3.1.3.1 Functions

Monitoring/Data Quality

This subdivision would be primarily responsible for project monitoring activities and oversight of data quality issues. The staff would work with the NICHP and other groups to produce regular (quarterly/annually) reports or chartbooks tracking the progress of programs and projects across the MOHP. They would work with the dissemination department to develop materials to communicate the routine monitoring information to a variety of target audiences and would participate in the dissemination activities. This subdivision would also respond to special requests of the Minister or undersecretaries for information regarding particular projects or activities in a specific geographical region.

One of the major issues with the current HIS is the lack of consistent denominators for many of the indicators based on population estimates. The Monitoring/Data Quality division will work with the Central Agency for Population Mobilization and Statistics, the organization responsible for the national census, to provide population projections for denominators and update them accordingly. In addition, the division would oversee indicator calculation for the other groups within the MOHP to ensure that indicators are consistent across different activities.

In order to keep this function small, outsourcing some well-defined activities to qualified vendors might be considered as an option to adding permanent staff.

Evaluation/Special Studies

This subdivision would conduct evaluations of programs and projects within the MOHP on two levels. Firstly, the staff will work on a consultative basis with programs and projects to incorporate program-level evaluation into their activities from the start, including indicator development, tracking methods, performance monitoring plans, and outlines for final evaluation.

Secondly, the department will undertake periodic impact studies to determine the success of a program on health outcomes at a national level. Special staff within the department will have the statistical skills to conduct multilevel modeling and other techniques necessary to impact evaluation. In addition, these staff would work on assessments of the relative impact of different elements of a program (i.e., information/education/communication efforts, service provision, training activities, etc.) in achieving program goals. These staff would work closely with program personnel on the technical aspects of the evaluations. The results of these studies would be communicated to

policymakers with assistance from the dissemination and training team. The evaluation team would work with the policymakers to enable them to interpret the results, vet them accordingly, and make decisions regarding resource allocations. Finally, the team would also be available to undertake special studies as requested by the Minister or other members of the MOHP management team.

3.1.3.2 Staffing

It is critical that the staff of this unit has the specific skills necessary to provide M&E technical assistance and to conduct research. The following are suggested profiles of staff for this department. The numbers of staff are also suggestions for the start of the department. Staff may increase as the unit develops. The suggested profiles of the staff include:

- *Research advisors*: These individuals will hold doctorates in epidemiology, biostatistics, health systems research, or related fields. They will also have a background and demonstrated experience in study design and health research. The individuals will also be very familiar with the structure of the health system in Egypt and the programs of the MOPH in particular.

- *Statisticians or data analysts*: These staff will have knowledge of data input analysis, sampling methods, and other statistical considerations for research. They will be fully competent in statistical analysis software packages. Their primary functions will be to provide statistical support for the design and analysis of the research conducted by the unit.

- *Data input specialists/programmers*: These staff will be junior-level statisticians and will support the data analysis efforts of the research and statistical staff.

- *Contracted enumerators for surveys*: These staff will not be full-time at the unit, but will instead be contracted out as need be for surveys or other forms of research.

3.1.4 Dissemination and Training Department

The Dissemination and Training department would be tasked with communicating the information produced by the Monitoring/Data Quality department to target audiences, and training those audiences on how to use the data for decision making.

3.1.4.1 Functions

Dissemination

This function would be designed to complement the EIS. The staff would bear the responsibility for producing reports, briefing papers, press releases, wall charts, and other forms of communication using the data and results produced by the Data Quality group. The staff would include specialists in information presentation, graphic design, and other relevant fields who can design materials that target particular audiences. The underlying idea of this subdivision is to communicate the data in ways that make it meaningful and useful to decision makers and program planners.

Training Activities

The department would also include a small group of professional trainers whose job it will be to work with the information consumers to help them utilize the data for decision making. The trainers would conduct workshops on monitoring and evaluation for Ministry officials, both at the central level and within the governorates and districts following the role-out of decentralized data collection. In addition, they would conduct refresher training with personnel in health facilities on how to fill out forms and keep records to assist with improving the quality data coming into the M&E unit.

3.1.4.2 Staffing

> *Graphic designers/communication specialists*: These individuals will have previous training and work experience in graphic layout and design especially as it applies to communicating statistical or health information. The graphic designers will work closely with the data analysis team to design reports, presentations, brochures, and other materials to communicate results to decision makers.

> *Training officers*: These individuals would have a masters degree in public health (MPH) with a background in health communication/education. They would be in charge of training activities conducted by the M&E unit and work closely with other divisions of the MOPH to design training seminars and workshops on various aspects of monitoring and evaluation for staff at the central and subnational levels. They would design curricula and serve as chief trainers at workshops, and supervise the assistant trainers.

> *Assistant trainers*: These staff members would work with the training officer(s) to organize and conduct the workshops

3.1.5 Economics Department

3.1.5.1 Functions

The Economics department would carry out the following tasks:

> Cost effectiveness studies for all national health accounts, and as requested by the Minister or other officials as reasonably required,

> The linking of budgetary data and project tracking; a continuation of BTS that would include a role for analyzing, but not controlling, expenditures under Bab 1 and Bab 2. Eventually this office would form the critical link in health planning among facilities,

> A cross-departmental clearinghouse for health policy analysis, leading to an advisory role to the Minister in health policy drafting.

3.1.5.2 Staffing

> *Chief health economist*: The chief economist would be in charge of all activities within the Economics department, including report of results of studies and relations with other Ministry officials and health policy decision makers

> *Junior economists*: The junior economists would assist the chief economist to monitor the budgetary data and assist with the analyses discussed above.

> *BTS specialists*

3.1.6 Coordination Department

3.1.6.1 Function

A second major office that could be set up as part of the second stage of M&E development would be a department tasked with coordinating M&E activities with other ministries of the government of Egypt and with donors. In the earlier phase of development of the M&E unit, certain staff in the Dissemination and Training department would assume some of the coordination functions. However, as the unit grows, we envision a separate department tasked with interministerial, intraministerial, and donor coordination would be needed.

Many of the monitoring activities and research plans for the MOHP may involve other ministries such as those concerned with urbanization, environmental issues, and even foreign affairs. The Coordination department would maintain relations with other ministries to ensure that such activities were conducted in collaboration with the interested other parties and those results were shared across ministries. The second function of the Coordination department would be to maintain regular contact with donor agencies. The department will assist the Minister in monitoring the activities of the donor groups to ensure that their projects meet the needs of the MOHP and avoid duplication of efforts. In addition, the Coordination department will conduct analyses of the types of financial and technical assistance supported by the various donors. This information will allow program planners to target the appropriate donor agencies for various forms of support and will maintain a position of control for the MOHP in donor-funded activities. Finally, the department would be tasked with maintaining regular contact with the different divisions of the MOHP to ensure that the vertical programs are always informed and involved in the various activities of the M&E unit.

The three main functions of the Coordination department would be:

1. *Liaison with other ministries*: While the M&E director will be the main provider of information on health program effectiveness to other ministries, he/she will not be able in the long run to keep up with demand and probably will need to delegate certain information-sharing duties.

2. *Liaison with other units of MOHP*: The Coordination department would be a clearinghouse for program information that other units of MOHP would produce and/or disseminate. As such, this office would seek to avoid duplication of effort in producing ad hoc reports. This function would be minor in terms of time and effort expended, but critical in developing a useful MOHP publication base that is efficiently assembled and managed.

3. *Liaison with donor groups*: At present this function is in the hands of the Minister, and he from time to time authorizes his executives to make contacts with donor groups or to answer their questions. Presumably, through its production of high quality analyses, which will be timely and quickly produced, the M&E unit will generate much interest, and will, if delegated by the Minister, initiate contacts with donor groups and become a major instrument of health reform.

This position is not intended to have a donor program oversight function, in that health professionals within the Office of Minister's Health Affairs are charged with those great responsibilities. This position will be the "one-stop shopping" point for donors with questions about MOHP studies that have been produced, or studies the donors believe ought to be produced. The person who occupies this position will no doubt report directly to the Minister due to the sensitivity of the information involved.

3.1.6.2 Staffing

Persons with MPH degrees in health policy or health communications. These individuals will maintain the liaison activities with the other ministries and donors under the supervision of the director of the M&E unit. They would free up the dissemination activities staff in the unit's Dissemination and Training department, allowing them to concentrate on building up the unit's capacity in information production and program development.

3.1.7 Budgeting Salaries for the M&E Unit

As with all initiatives taken to further health reform by adding or transferring staff, there may be a problem of adequate compensation for specialists attached to the M&E unit. It is a well-recognized fact that the standard pay scale for government employees in Egypt is insufficient to attract and retain qualified data analysis and some other professionals. There are decrees placing limitations on multiples of pay, which can be added to the base pay of these officials. For example, a maximum of 300 percent is applied for the managerial classes; the director is limited to 200 percent. However, there also are provisions in Egyptian law for incentive differentials amounting to several multiples of base pay, and those incentives have been used successfully in some areas of government service.

In certain cases the MOHP has been able to provide extra compensation based on the special skills of needed staff. The prime justification for extra compensation for these positions is that the work is very important and complex. The secondary rationale is that significant extra hours are worked on a regular basis in order to carry out the complex and important tasks assigned to the unit. A third justification is for service in geographically remote areas.

There is also a system whereby donor funds can be used to pay honoraria for specific activities. For example, extra funds are available in some agencies or programs for attendance at committee meetings, training sessions, and the preparation of research or academic papers. Non-salary benefits also are available to those in need of special training in computer operations.

A method, which is in common use in other countries to provide for pay differentials for certain classes of jobs, is contracting for services. In Egypt, the practice is becoming more common, with contractees typically receiving a one-month per year pay bonus, social insurance, a cost of living adjustment, and a 33 percent bonus at the end of the contract year. A limiting factor for this method is that salary caps are applied to personnel who contract this way with standard Ministry agencies.

However, the HSRP, for example, is a non-Ministry organization, and as such it enjoys a different status which enables a more flexible pay structure for those employed under it. Because of the special nature of the donor-assisted work, specialists from outside organizations are often brought in to carry out duties for the project, which is usually short term in nature.

The HSRP has developed a salary policy for Egyptian personnel, as well as a special salary schedule based on the special nature of the unit. The salary schedule itself is based upon an extensive survey of salary scales and other work conditions in Egypt, including as its prime model the U.S. Embassy scale, which is a benchmark for donor-assisted pay. Secondary sources for comparison are the hotel industry and the agricultural programs funded by USAID.

The salary schedule is composed of 13 steps in each of 12 pay grades. Steps are annual, but are not automatically given. In addition, premium (overtime up to 50 percent extra) pay or compensatory time off is granted for working in excess of six hours per day, and a bonus is granted twice per year, totaling an extra month's pay.

Positions from janitor up to program director are scheduled. Top pay in this schedule is LE 137,239, which is used here for illustrative purposes only. The M&E unit, because of its special nature and the complexity and importance of its work, would most likely benefit from an incentive salary schedule, like this one, but with the actual pay levels to be decided on a survey of comparable jobs within the donor programs community.

Such a survey should take into consideration the nature and extent to which the highest administrative positions differ in complexity and qualifications from standard high level administrative positions in the Ministry. It is likely that the M&E director's position would not be at the LE 137,000 level, and it is likely that the highest level information technology (IT) positions would be grouped near the top of whatever scale is developed due to the high demand for IT specialists in the private sector.

Table 1. Staffing Estimates for the Three Options

Entire Unit	Staffing	Comments
Phase 1		
Option 1	Director	An expert advisor could be provided for 2 years (for all 3 options)
Accreditation board	Volunteer members	Will require a small clerical staff of 2-3
Quality and Accreditation department	Chief 3 doctors 1 nurse 1 accreditation expert 1 trainer 5-6 clerks	Chief must be skilled in managing a diverse work force in a high visibility situation
Data Quality and Use department	Chief 2-4 statisticians/data analysts 2 data input specialists/ programmers	Chief should have a doctoral-level degree. Enumerators can be hired on contract as needed, not as full-time staff
Dissemination and Training department	Chief 2 graphic designers/ dissemination specs. 1 MPH 2 assistant trainers 1-2 clerks with computer graphics skills	Chief must have public relations background and be prepared to do some of the inter- and intraministerial publicity and contact work personally
Option 2	Director	Lower rank than in Option 1 because position is in the NICHP
		Accreditation board cannot be supported in this option
Option 3	Director	Lower rank than in Option 1 or 2 because the scope of the unit is less
		Accreditation board cannot be supported in this option
Phase 2		
Option 1		
Economics department	Add 6 data analysts Add 4 BTS specialists	5 analysts and 4 BTS staff report to a chief analyst, who reports to the head of Data Quality
Coordination department	Add 3 communications specialists	All report to head of Dissemination and Training

3.1.8 Advantages and Disadvantages

Configuring the M&E unit as a stand-alone unit has the following advantages and disadvantages.

Advantages

> An autonomous unit with budgetary and staffing control, it would have clarity of mission.

> Links with NICHP and other units within the Office of Minister's Health Affairs would be strong.

> The unit would exist at a supervisory level above the vertical programs and could provide oversight and coordination assistance to them.

> The unit would operate with the authority of being close to the Minister, which is favorable for IT and other budgetary support.

> It would become a focal point for donors in search of information or offering advice on needed analyses.

> The unit has the potential over the years of becoming a center for the creation of internal planning and audit functions which will contribute to health reform in very concrete ways, such as rationalizing Babs 1, 2, and 3 in hospital and clinic construction and operations.

> The accreditation board would depoliticize to some degree the process of licensing facilities because of its high visibility and transparency of process.

Disadvantages

> There might be confusion regarding role of NICHP vs. an M&E unit, both within the two units and in the larger Ministry.

> An additional unit of the Ministry at the top level would compete for "quality time " with the Minister.

> There might be competition with NICHP for budget, staff, and activities.

> There might be difficulties in establishing new roles and responsibilities vs. those already set up in MOHP organigram.

3.2 Option 2: Unit of NICHP

This option assumes that the M&E unit will be subsumed into the National Information Cener for Health and Population and work directly with the data collection functions of the NICHP.

Under this arrangement the M&E unit would not report directly to the Minister or to the undersecretary. It would instead be within the hierarchy of the NICHP, co-equal with four other units, and would be charged with analysis of the data collected through the NICHP. This approach has the advantage of putting the M&E function in a clearly defined location for both administrative and

policy reporting purposes, and as such would give it the prestige necessary to collect data from outlying units and agencies within the governorates.

With a location established within the NICHP, and with there presumably being a daily reporting relationship with the director general, the M&E role would be firmly established and would enjoy the benefits of a budgetary allocation that would rise or fall with the overall allocation for the NICHP.

This arrangement violates the notion, and the decree that sets up M&E as a priority function of the Minister's office. One could assume that the current Minister will go to the M&E unit wherever it is located in the hierarchy and make good use of it, but future ministers may choose not to do so. Formalizing the M&E unit's place as in Option 1 does not guarantee its success, but it positions it better for the short tem than does this option.

There are, however, financial and organizational efficiency advantages to Option 2.

3.2.1 Advantages

> The M&E unit would have access to data systems that already feed into the NICHP.

> It would provide a much-needed analytical capacity for NICHP.

> It would greatly increase the effectiveness of the EIS as a management tool for executives in the MOHP and would be useful to them as a learning opportunity.

> It would provide for the unit ready access to the staff and facilities of NICHP—avoiding the need for new funding for hardware and avoiding duplication of staff.

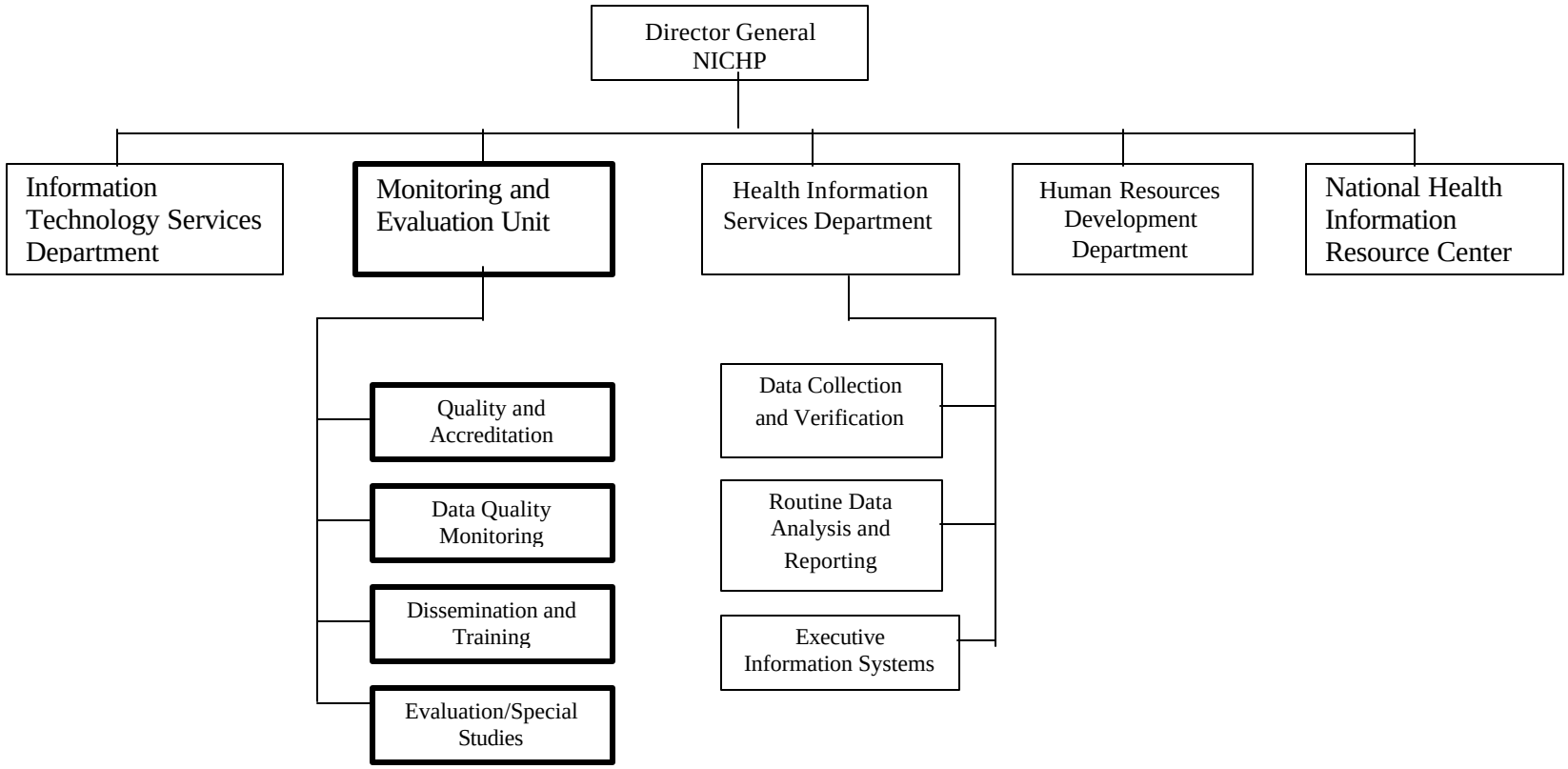
3.2.2 Disadvantages

> There would be no separate budget control for M&E, and this could be fatal to the continuation of the unit after a few years.

> NICHP's emphasis on data collection may diminish available resources for quality control and analysis.

> The M&E staff might be taken off their main duties in favor of helping NICHP or BTS or some other activity.

Figure 2. Option 2: As a Unit of NICHP



3.3 Option 3: Coordinating Function of the Ministry that Pulls in Data from Individual M&E Units

Most of the organizational units and divisions within the MOHP have a program review function or office of some form. These vary greatly in name and in scope, some reportedly serving useful purposes and some being dormant. Therefore, a third option for the M&E function would be to serve as an M&E consultative unit or "information clearinghouse," which would exist outside the existing organizational structure and report directly to the Office of Minister's Health Affairs. The unit would have close ties with the monitoring and evaluation activities of the various vertical programs, but it would neither report to them nor oversee their activities. This unit would obtain its data from the various offices, and would provide technical assistance and monitor the quality of the M&E activities going on in the vertical programs and other units of the MOHP.

This approach would provide a resource for M&E expertise for program managers and would serve to develop analytical consistency among programs. The staff in the unit would serve as advisors and mentors to the various programs and projects to help develop expertise in monitoring and evaluation techniques. In addition, this unit could conduct applied research on various aspects of the health care system in conjunction with staff from the relevant vertical programs.

The unit would also have a dissemination function, which would provide feedback to governorate- and district-level program managers on program results. This function reacts to specific complaints about the current unidirectional flow of data that lacks the benefit of downward feedback on program effectiveness and the connection between service demand and budgetary allocation for a given service or set of goods.

The Accreditation department described under Option 1 would become a component of this unit and would maintain all the functions and responsibilities described previously.

Under this option, the M&E unit would face many challenges as a new organizational structure within the Ministry. It would require a redesign of the Ministry's organizational structure, new budget and staffing allocations, and much in-house education as to its functions and responsibilities. It also would probably not function as strongly as Option 1 as an instrument of change, nor as a tool to bring all the executives of the MOHP up to a higher standard for data analysis and resultant health intervention planning.

3.3.1 Advantages

- As an autonomous group, the unit would control its own budget and activities.
- As an autonomous group, the unit would report directly to the Minister, thereby avoiding any conflict of interest or bias resulting from reporting hierarchies.
- Over time this unit would have a complete knowledge of the MOHP's analytical capabilities.
- Emphasis is on downward feedback to end users at the district, facility, and program levels.
- This may be the most appealing option to the managers of the vertical programs.

> The dissemination component would meet the great demand for feedback to subnational levels on program and project activities.

3.3.2 Disadvantages

> The M&E unit must establish data-sharing relationships with each of the vertical programs, something which has been difficult in the past

> There is no existing support because the unit is autonomous and new.

> Of the three options, this one may cause hostility in program managers who are doing a good job of analysis, and those doing a bad job and wishing to hide that fact.

> Lack of a solid linkage with NICHP may cause duplication of data and efforts, and leave NICHP without much needed analytical capacity.

3.3.3 Staffing

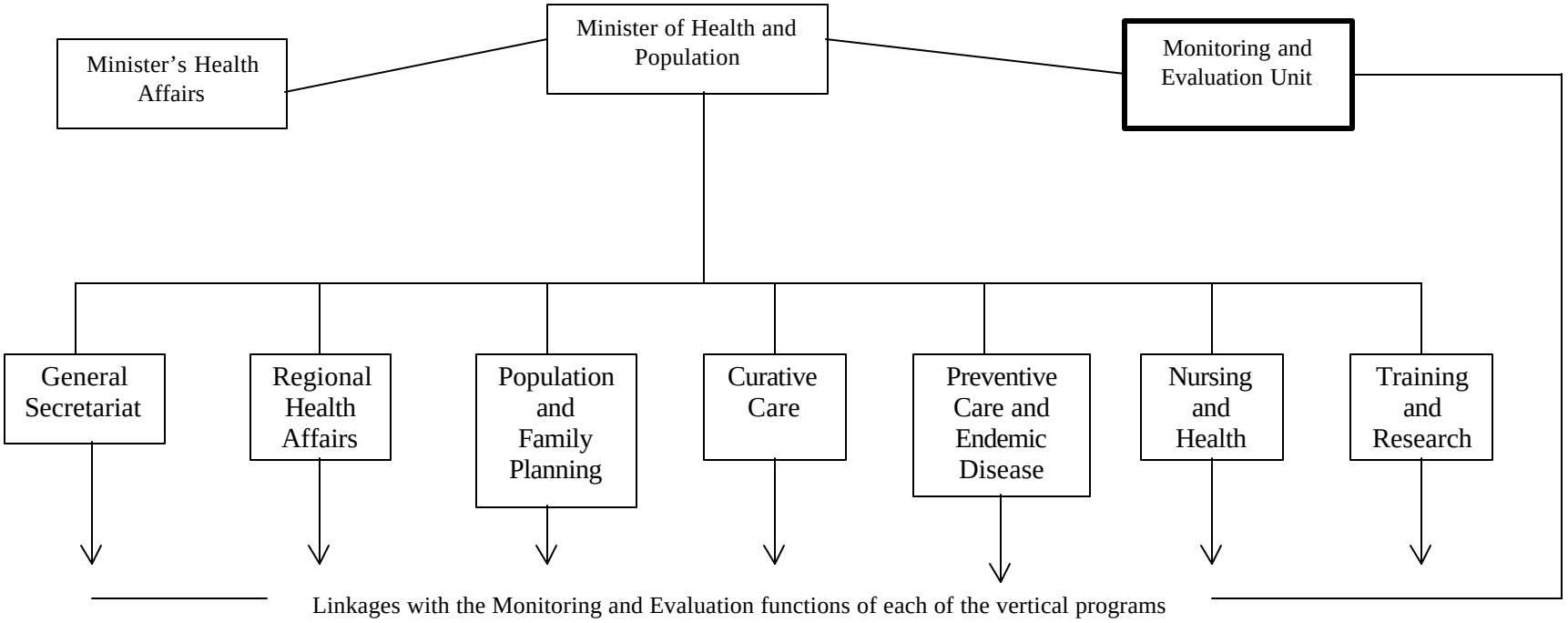
> One director with a doctorate in epidemiology, biostatistics, health economics, or related field. This person would oversee the activities of the unit and report directly the Minister on unit activities and relations with the vertical programs. In addition, this person would report back to the heads of the various vertical programs to maintain streamlined communication.

> Eight to 10 statisticians/analysts: ideally one for each of the vertical programs (although larger programs, such as Family Planning, might require extra staff). These individuals would be in charge of the routine collaboration with the vertical programs. They would work directly with vertical program staff to verify data quality, analyze data, and draft reports. In addition, these individuals would also liaise with their counterparts working with the different vertical programs to assure consistency of data and to identify and conduct any cross-cutting analyses.

> One technical trainer who would conduct trainings on various aspects of M&E for the vertical programs and others within the MOHP.

> Two graphic artists/publication specialists: these individuals will bring together the information generated by the statisticians into clear, easy-to-use reports for broad dissemination.

Figure 3. Option 3: A Coordinating Function of the Ministry, which Pulls in Data from Individual M&E Units



3.4 Comparison of the Options

The ultimate design of an M&E unit will depend on the advantages the chosen option provides for the Ministry in carrying out its mandates in monitoring and evaluation, and on the likelihood of the Ministry in gaining the necessary financial and personnel resources and the administrative ability to carry out the implementation.

While there will be advantages and disadvantages in each design option, the primary criterion for choosing one over another, or perhaps arriving at a blended model, will be the relative gain for the MOHP in its need to meet reform guidelines in the long term. In the short term the applied option will need to provide a means for promoting a highly effective M&E cadre that coordinates data analysis activities without unduly overlapping with existing offices, without unreasonably challenging existing reporting relationships, and without seeking unrealistic increases in the MOHP budget.

The expected gains to MOHP from seeking one or another of the three options are shown in Table 2 as either High, Low, or Very Low. The criteria upon which those gains were estimated for each option are the following:

- Ease of implementation: As time is of the essence in meeting health reform goals and in institutionalizing the FHF and other reform programs, those options which require long preparation periods and are likely to involve lengthy negotiations within and outside the MOHP will not bring about gains.

- Expense, or added size of staff and support: Similarly, large increases in resources will require lengthy negotiations and encumber risk in reaching needed outcomes.

- The degree of authority the unit would have in this configuration: Access to and steady two-way communication with the Minister or his designee are critical to the success of the unit. The option which offers the unit the needed access and authority, and provides sufficient administrative autonomy in carrying out its missions will offer the greatest gain overall.

- The degree of acceptability anticipated to donors, vertical program managers, the NICHP, the DOP, and other major related offices within the MOHP: These institutions will favor a unit that efficiently provides them with data or program results reporting without appearing to duplicate or control their own efforts.

- Whether the option supports the independent accreditation board concept: This is a key element in building the credibility of the accreditation function.

- Whether the option would compete with existing offices for funds or equipment: Allocation of scarce resources is always a critical issue, and building in resistance on the basis of financial competition will defeat M&E unit implementation.

- Whether the option might add undue levels of complexity to the collection and analysis functions of MOHP: There is little or no gain if the chosen option fails to become an effective and fast acting tool for the Minister and his policy staff.

Table 2. Comparison of the Three Options

Advantages	Disadvantages	Relative Gain for MOHP
Option 1: Stand-alone unit reporting to the Minister		
Accreditation Board set up and operates under objective, open criteria	Need for substantial commitment to increased staff and an enhanced compensation package for specialists	High
Clinical guidelines component strengthened greatly	Confusion or perceived competition with NICHP	
Data quality and use section carries out advanced evaluations of health programs and takes care of ad hoc needs	More functions and staff for the Minister to manage closely	
Measurement indicators become refined and standardized	Potential for slow startup if the concept is not well received	
Data for decision making and other techniques become disseminated effectively		
Economics department could provide a link between expenditures and program effectiveness, including Babs 1, 2, and 3		
Liaisons, internal and external, would be systematized and controlled better		
"One-stop shopping" for donors		
Option 2: As unit of the NICHP		
Can creatively incorporate into it certain units of NICHP	Violates current thinking and decrees to have M&E at the highest level	Low
Can provide sustainability for NICHP	Vulnerable in future budget struggles because it is not directly under the Minister	
Data systems already in place	Uncertain NICHP leadership could be problematic	
NICHP would gain analytical capability	Could be an ongoing need for role definition	
Option 3: Coordinating unit for vertical M&E functions		
Autonomous group as to budget and staffing allocations (also a disadvantage at times)	Lacks authority in the hierarchy	Very low
Reports directly to the Minister, and serves as a consolidating force for vertical program M&E efforts	Much time needed to determine current practices and strengths within the various M&E units of vertical organizations in MOHP	
Can quickly ascertain the strengths and weaknesses of vertical organizations in allocating resources for specific programs	No existing support in the hierarchy	
	Potential conflict with NICHP: duplication, lack of coordination	

4. Summary of Findings and Recommendations

It is recommended that His Excellency Dr. Ismail Sallam, the Minister of Health and Population, give strong consideration to Option 1, and adopt those features from the other two options that would strengthen the unit and be in agreement with following basic principles:

1. The unit should report to the Minister or to someone in his office on a regular basis. This is critical to having the unit perform under clear administrative and policy leadership.

2. The NICHP should be the "data warehouse" first and foremost, and consideration should be given to any of the reorganization possibilities presented in Option 2 for using offices from NICHP to make up basic components of the M&E unit.

3. The NICHP faces questions about its own sustainability. The M&E unit will provide it with an analytical capacity that is needed to build upon the very substantial and competently crafted databases now in existence or in the testing stage (EIS).

4. The staff do not all need to be medical doctors. Epidemiology and business/IT backgrounds are needed, and there are tools to provide some salary incentives to attract them.

5. The M&E unit could be a valuable resource for the High Committee for Health Insurance, in terms of providing studies and evaluations that could support its policy dialogues and its decisions.

6. The FHF model points out the need for an M&E function (Edmond et al., 1999)[5]. At the time that report was written, the M&E concept had not yet been defined as to how some unit at the highest level of the MOHP could help the FHF Fiduciary Board in its internal audit and quality control functions. The present report puts an M&E unit into place with its prime responsibility for the near future being the close oversight and monitoring of the pilot FHF units as a model for all the rest to follow. Having an M&E office without a focus on FHF might be too abstract to gain support at this time.

7. The semi-autonomous Accreditation Board would be a very tangible benefit for the Ministry in that it will comprise qualified experts and have a transparent method of reviewing applications and making accreditation decisions based on clear, objective criteria. Option 1 offers a basis for an accreditation board, whereas options 2 and 3 do not provide an M&E unit in which an accreditation function could reside as a board.

8. The M&E unit should not become a large organization, in part because it will compete for scarce funds. However, in terms of competing for scarce staff, it may be advantageous to have an M&E unit which can second certain talented staff from the vertical organizations without stripping them of their analytic functions.

9. A separate compensation plan will be required. Since several precedents for doing so have been set already, an enriched plan for these highly specialized staff will be acceptable to others in the Ministry.

Annex A: NICHP Staff

Eighty-eight people currently work at the NICHP

Senior-level Personnel

- Director General (1)
- PHR Health Information Systems Advisor (1)
- Health Information System technical staff/URC (8)
- Senior Programmer - EIS
  - Senior Programmer - PBS
  - Senior Programmer - assigned to the Department of Planning (DOP) BTS activity
  - Senior Data Analyst - assigned to the DOP NHA and BTS activities
  - Data Analyst - assigned to the DOP NHA and BTS activities
  - Senior Programmer - EIS
  - Training Coordinator
  - Network Administrator
- Health Information system technical staff/Health Mother Health Child (3)
  - Health Directorate Support Unit Director (currently vacant)
  - Data Analysis Assistants (2) HDSU
- Health Information system technical staff/PHR (2)
  - Senior Network Administrator
  - LAN administrator/ Project Assistant

Junior-level Personnel

- Health Information system technical and administrative staff/URC (5)
  - Network Technical Support (2)
  - Training Assistant
  - Accountant
  - Administrative

- Information Technology Institute (ITI) supplied employees (9)
  - Cancer Registry Technician (2)
  - Database Programmers (4)
  - Website Developer (2)
  - Network Technical Support (1)
- Ministry of Health Employees (57)
  - System Analysis and Design (3)
  - Statistical Technician (27)
  - HIS Support and Data Analyst (2)
  - Technical Support (4)
  - Administration/other (16)
  - Library Assistant(3)
  - Department Manager, HIS Directorate (1)
  - Department Manager, System Design and Development (1)

Annex B: Reference List

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Edmond, Alan H., Mary A. Paterson, Ahsan J. Sadiq, Linda M. Sadiq, Susan Scribner, and Nena Terrell. December 1999. *Establishing a Family health Fund in Alexandria, Egypt: The Quality Contracting Component of the Family Health Care Pilot Project.* Technical Report 42. Bethesda, MD: Partnerships for Health Reform, Abt Associates Inc.